Design Build
Materials Quality Analysis Program

Policy

The Design-Builder sampling and testing results may be used for acceptance provided that they are validated by WSDOT's verification sampling and testing

Both the Design Builder QA and the WSDOT's QV test data will be recorded in a joint database that has been set up to statistically evaluate the test data to determine the acceptability of the material tested. This evaluation will be performed by using the F and t Test analysis as described in AASHTO Report Titled "Implementation Manual for Quality Assurance", Appendix F, dated February 1996, or other similar F and t Test analysis. The QA Manager shall be responsible for performing the evaluation. Any test data that is found to be outside the normal F and t distribution will have to be reviewed by the Quality Assurance Team and a determination be made to why the test data is outside the normal distribution.

The Quality Assurance Team shall make cooperative effort by the Design-Builder and WSDOT to identify the cause of discrepancies in test results. A report will need to be generated defining what the problem was, the cause of the problem, and the solution to prevent the problem from happening again. As a minimum, the review should include the following actions:

- A check of test data, calculations and results;
- Observation of the sampling and testing by the Independent Assurance Inspector;
- Check of test equipment by the Independent Assurance Inspector.

When certain attributes of a material are not statistically evalu  for acceptance, such as concrete slump, entrained air content, and temperature for concrete, and the differences between the Design-Builder's test results and verification test results exceed the values for precision and bias as found in the testing procedure, placement of the material shall be halted until the Design-Builder can demonstrate that the material is within the required specifications.

Discussion

When contractor's testing is used for acceptance, the federal regulations require that the material quality be validated by random verification sampling and testing.